



## GREETINGS FROM NAVARINO ENVIRONMENTAL OBSERVATORY

EDITED BY NEO TEAM

This newsletter summarizes research and educational activities undertaken at NEO, towards our continuous pursuit of knowledge for a more sustainable future under a changing climate.

Thank you for being a vital part of the NEO community.

Happy Reading!

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## **Peloponnese colloquium, May 11-12**

Since 2018, the Geology Laboratory of the École Normale Supérieure of Paris (ENS) and NEO have been building a collaboration aiming at fostering connections, sharing knowledge and data, and collaborating on research related to environmental monitoring, geology, tectonics, aerosols, tsunamis, among others.

On this direction, a two days get to know multidisciplinary scientific meeting between researchers with an interest in Peloponnese, was held at NEO field station during May.

The colloquium was commonly organised by ENS and NEO, and it was attended by 10 participants from several research institutes of Greece, France and Sweden.

Discussions and presentations were related to trending topics in earth and environmental sciences under the main categories of:

- Geology and geomorphology of the area
- Earthquakes, tsunamis, and sea level change
- Climate change, atmosphere, and aerosols
- Applied geophysics and paleo-environments
- Water resources and geosciences



## HAAR-PANACEA PhD Summer school, June 8-15

The fourth HAAR international summer school entitled: ***“Theory and practice of aerosol chemistry and engineering for climate, air quality, emissions and health effects, by means of In-Situ and Remote Sensing Observations”***, was held at NEO during June.

The objective of the summer school was to train young researchers on state-of-the-art instruments and tools, and on analysing and interpreting data in the context of climate change. The summer school was organized around lectures that covered the basic theory, and hands-on training on:

1. in-situ instruments for measuring the concentration, size and chemical composition of atmospheric particles,
2. systems for probing the vertical distribution of the atmospheric aerosol, and
3. new integrative approaches using models and observations for impact assessment.

**17 lecturers from 4 countries**

**18 PhD students from 7 countries**

### **Did you know?**

Aerosol particles are key components of atmosphere and thus strong determinants of climate at local, regional, and global scales. To understand how emissions by a number of natural and anthropogenic sources contribute to the atmospheric aerosol and to climate change there is a need to combine both in-situ and remote sensing observations with model predictions.

# FIELD COURSE VISITS

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## Physical Geography BSc, March 4-11

28 students and 4 teachers participated in the field visit of the Physical Geography course from Stockholm University which was hosted at NEO in March. The main goal of this course was for the students to acquire knowledge in a variety of methodologies for environmental research.

The field course consisted of excursions and teaching at different places around Messinia and Arcadia, and field work activities carried out at four study areas in proximity to NEO station.

Topics that were covered were the geomorphology of the area, the impacts of human pressure on ecosystems and how climate change and land use processes might shape the landscape in the future.



## Cultech MSc, April 23-25

The MSc course on Cultural Heritage Materials and Technologies (CultTech) is offered by the Department of History, Archaeology and Cultural Resources Management, and operates in collaboration with the National Center for Scientific Research Demokritos, the Navarino Environmental Observatory (through the National Observatory of Athens) and key lecturers from other academic institutions in Greece.

8 students and 4 teachers visited NEO for a 3 days educational program which is part of the curriculum. Apart from fieldwork and lectures, the students had the opportunity to explore the natural and cultural environment of Pylos area, and be informed about NEO's activities in the area.

SALAM-MED, builds upon an interdisciplinary network of research organisations across the Mediterranean, with the aim of restoring degraded land and enhancing resilience of socio-ecological systems around the Mediterranean, based on a Living-Lab (LL) approach. The Greek LL is coordinated by NEO and AoA (Academy of Athens), and aims to assess agri-ecological farming practices for improving soil quality and water retention together with local stakeholders, towards an Integrated Olive Orchard Management. During the reported period (January to June 2023), the Greek LL, in collaboration with the project partners, have focused on the development of field experiments and stakeholders' engagement.



### **General Assembly in Tunisia, February 7-9**

The NEO-AoA team participated in the General Assembly of the project, which was organised by the Arid Regions Institute (IRA) in Djerba island. During the meeting the participants were introduced to the Tunisian Living Lab having fieldtrip excursions and meetings with local stakeholders.

### **1st Greek Living Lab-Workshop, April 6**

The aim of the first workshop was to get a holistic view on issues related to olive-oil production, based on inputs from 25 local stakeholders. After the introductory presentation about SALAM-MED project and the Greek case study, an open discussion was followed where all the participants expressed their issues, concerns and ideas regarding olive oil production process.



### **Irrigation Experiment**

The aim of the experiment is to understand the impact of water usage on the growth of olive-trees and olive-oil quality, by evaluating three distinct irrigation methods: (a) phenology-based irrigation, (b) current irrigation pattern, (c) rainfed. The installation was completed in spring (May), and the experiment will run for at least two years in collaboration with the local farmer who owns the orchard.